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## Exclusive Reports

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# Valley likely defense player

Neil Orman and Timothy Roberts

Silicon Valley is poised to play a big role in the defense buildup for the war against terrorism, a throwback to an era when defense drove the region's high-tech innovation.

From Menlo Park to Livermore, technology executives and researchers are mobilizing their own troops in anticipation of calls from defense customers. Some firms are already taking a flood of new orders.

It was defense spending that sparked the development of semiconductors and satellite communication technology here, starting about 50 years ago. Defense dollars paid for the development of the Internet.

Employment in defense here peaked in 1989 at 41,000. But following the fall of the Berlin Wall and the postponement of the Reagan-era missile defense system, employment began to drop, hitting a low of 21,400 last year. Few manufacturing jobs remain. Most of what remains is research and development.

Now defense spending is expected to grow again, and valley companies, which make everything from biological weapons sensors to signaling equipment for intercepting the phone calls of terrorists, are expected to benefit.

"The [valley] tech sector has a lot to offer when you look at the defense of the nation," says U.S. Rep. Zoe Lofgren, D-San Jose.

Congress has authorized an extra \$40 billion in spending, almost half of which may go to rescue operations and rebuilding Manhattan. The remainder will be used for defense. And if the United States goes to war, it could be only the beginning.

So soon after the East Coast terrorist disasters, there are no projections of how more defense spending would add to the job rolls. But the valley is home to much of the brain power at work on the nation's biggest defense challenges -- biological weapons, surveillance and satellites among them.

Moreover, this war is expected to be far different from other conflicts. It is expected to employ a wide variety of technologies, including many that are now used in civilian products. For example, digital imaging can be used in surveillance (See Page 3).

Along with high-profile companies such as Lockheed Martin and General Dynamics, the defense community also includes major nonprofit research institutions such as SRI International and Lawrence Livermore National Laboratory, both of which have been on their own high alert since last week's tragedies.

"We believe that we have a lot to offer the government," says Larry Dubois, vice president of SRI's physical sciences division. Dubois says SRI, which recently shipped six sensors designed to detect biological weapons threats, has been holding feverish internal discussions since last week's terrorist acts. Researchers have been discussing ways they can tailor current research or launch new projects to meet the nation's changed priorities. Lawrence Livermore National Laboratory, which also develops biological warfare sensors, has responded similarly to the attacks. Both institutions rely heavily on defense dollars.

"We've sent up word of what we could do, and how we could beef up our work," says Bert Weinstein, acting associate director for biology and biotechnology research at Lawrence Livermore. "If some of [the government money] goes to countering terrorist actions, there's a big possibility that some of it will end up here."

SRI rushed into action in the Persian Gulf War in 1991, when the Defense Department asked it to develop biological weapons sensors.

"The war was over so quickly that they never got deployed," says SRI's Mr. Dubois, who says the institute may be asked to undertake similar projects if the United States goes to war again.

For the for-profit companies such as InVision Technology Inc. and Applied Signal Technology Inc., the aftermath of last week's disasters has brought several major benefits, including huge run-ups in stock price and a major increase in customer interest. The stock price of local bomb-detector maker InVision rose 165 percent on Monday to \$8.25, before dropping back down to \$6.72 on Wednesday. Applied Signal's stock rose nearly 50 percent during the three days to close at \$7.65 on Wednesday.

Applied Signal CEO Gary Yancey estimates his company has received a 30 percent to 40 percent increase in orders since the Sept. 11 terrorist attacks. The company develops signal processing technology used by the U.S. government and allied foreign governments to listen in on telecommunications. Since the attacks, many government customers have asked for accelerated delivery, Yancey says.

"We've had a tremendous number of phone calls asking for speeding equipment delivery, or even asking for 24-7 work delivery schedules," Yancey says.

The phones at InVision also have been ringing constantly.

When Congress takes up the new military budget that could boost those technology orders, it will be working in a whole new environment. The Department of Defense is expected to have fairly wide latitude in the way it spends the money. Lawmakers will have a harder time diverting money to their own districts for pet projects.

"The rules have changed," says Martin Anderson, a senior fellow at the Hoover Institution at Stanford University and an adviser to presidents Reagan and Nixon. "This is not business as usual."

Although Ms. Lofgren says Congress is not about to give up its oversight of the budget, she agrees that it would be considered unpatriotic to fight over which congressional district gets the most defense dollars.

"The first member of congress to try to stick in a pork project will be turned to dust politically," she says.

But the valley's congressional delegation is expected to make sure that new weapons make use of the technology for which the valley is famous.

"Our companies will have a critical role to play," says U.S. Rep. Mike Honda, D-San Jose. "We just have to ask them, 'Where do you fit into this overall picture?'"

Mr. Honda also is asking the House Aviation subcommittee to hold a hearing to examine how new technology can be used to make air travel safer.

There always has been a close relationship between Silicon Valley and the Department of Defense, says Doug Hinton, president of Collaborative Economics, a consulting group in Mountain View.

"That's why the valley exists," he says.

Technology developed here continues to play a major role in the country's defense. Applied Signal CEO Mr. Yancey says people in the intelligence community have suggested that the firm's technology has been used in past efforts to spy on suspected terrorist mastermind Osama bin Laden.

"It is well-known that Osama bin Laden uses [standard] GSM and CDMA cell phones," Mr. Yancey says. "We have equipment that can be used on those types of communications."

*NEIL ORMAN is a member of the Business Journal's technology team. TIMOTHY ROBERTS covers government and politics for the Business Journal.*



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